Tempe Fire Department Policies and Procedures
Major Medical
210.03
Rev 10-1-82

INTRODUCTION

This plan establishes a standard structure and guidelines for the management of Fire Department operations in a multi-casualty emergency medical situation. The basic system may be applied to any multi-casualty incident. Such situations may or may not include firefighting and other emergency operations which are not a part of this procedure. This plan will integrate into the overall fireground management system. All Tempe Fire Department standard operating procedures will be applied to medical emergencies.

IT IS THE POLICY OF THIS DEPARTMENT TO INSTITUTE STANDARD COMMAND STRUCTURE AT EMS INCIDENTS REQUIRING THE COMMITMENT OF THREE OR MORE COMPANIES. It is the responsibility of Command to make an early determination of situations requiring the implementation of this plan. The basic system outlined in this procedure is applicable to all multiple patient situations and will be used routinely in such incidents.

Command will implement this tactical plan whenever a large scale medical incident in encountered. Fire Alarm will automatically begin notification of hospitals and other involved agencies when this plan is initiated. The extent of this notification and the level of mobilization will depend on the scale of the actual incident.

Situations calling for this action include those in which the number of patients involved and/or severity of their injuries requires coordination with several hospitals and situations in which complex extrication, treatment or patient transportation problems are encountered. Examples include major transportation accidents, fires, or explosions with multiple injuries, hazardous materials incidents with exposure victims, and structural collapse incidents.

ARRIVAL

The first arriving unit at a serious multiple patient medical incident will assume command and begin an initial size-up of the situation. The type of situation and the approximate number and condition of patients should be reported to Alarm as soon as possible.

The officer assuming command should immediately request assistance if the need is indicated. Alarm will begin to notify other agencies and medical facilities based on the amount of assistance requested at the scene and the reports from Command. The initial reports should indicate the scale of the incident to structure and appropriate response from other agencies.

Assistance should be requested using standard assignments and alarms as much as possible (i.e., 2-1 assignment, First Alarm, Second Alarm, etc.). This will facilitate an incremental approach to the incident, similar to firefighting operations.

COMMAND RESPONSIBILITIES

The officer assuming command of a medical incident is responsible for the management and control of the following functions:

1. Establishment of a command post and appropriate command structure.

2. Determination of resources needed to accomplish objectives.

3. Extrication of trapped patients and movement of patients to appropriate treatment areas.

4. Triage of patients.

5. Field treatment, stabilization, and preparation of patients for transportation.

6. Transportation and distribution of patients to appropriate medical facilities.

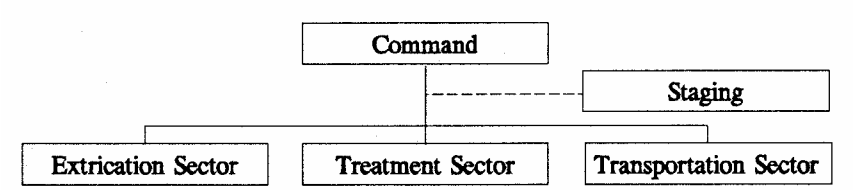
7. Provision of medical supplies needed at scene.

8. Liaison with other departments and agencies involved in the incident.

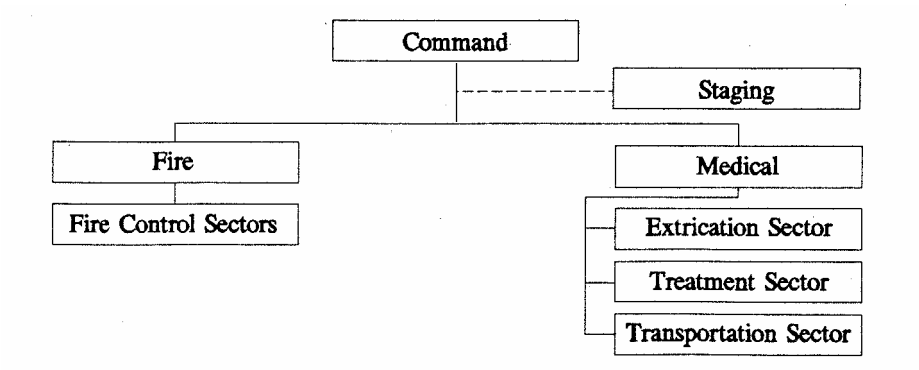
9. Communication of regular progress reports to Alarm.

These overall Command responsibilities may be assumed by the officer in command of the entire incident or may be delegated to an operations level or sector level, depending on the size and complexity of the situation. In most cases, the responsibilities will be further delegated to individual sectors. (See Figure 1.)

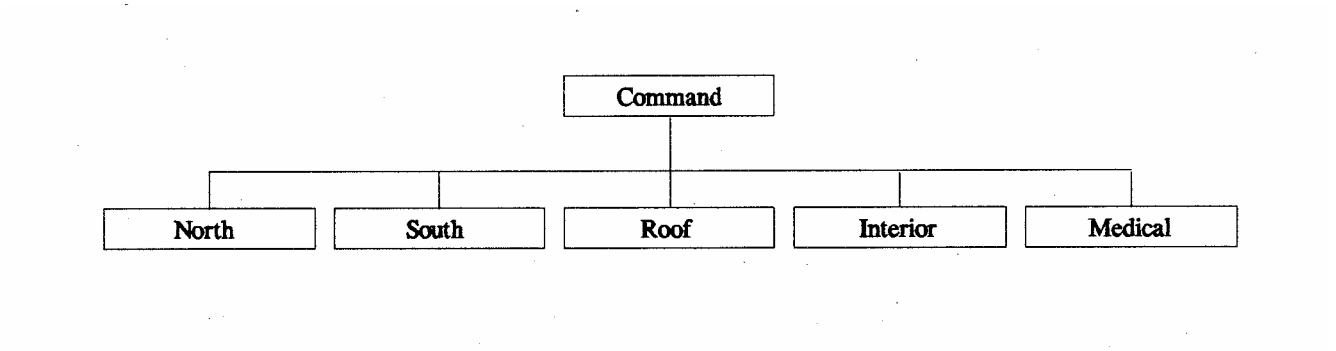
1. The responsibilities would be retained by Command at an incident which is entirely or primarily of a medical nature, with sectors reporting directly to Command.



2. The responsibilities would be assigned to an operations level ("MEDICAL") at an incident involving significant firefighting or other operations. In this case a separate radio channel should be designated for units assigned to the medical operations officer.



3. The responsibilities may be assigned to a medical sector officer in incidents where the medical functions are a small part of the overall operation and one officer can effectively manage the responsibilities.



BASIC OPERATIONAL APPROACH

This tactical plan is intended to deal with incidents involving significant numbers of patients in need of emergency medical care. This could range from five to ten patients to hundreds of patients in a major disaster. The same basic approach should be employed in either case, adjusting operations to the scale of the incident.

The first priority is to locate the patients, assess the emergency care they will need, and remove them from any immediate physical danger. This may require forcible extrication of trapped patients. Ambulatory (Priority 3) patients should be removed immediately to an "Assembly Area" where limited medical care is available. Non-ambulatory patients (Priority 1 and 2) should be moved to "treatment areas" for more intensive medical care.

Treatment areas should be established for Priority 1 (life threatening) and Priority 2 (non-life threatening) patients in safe and convenient locations. The objective is to concentrate medical resources to provide effective field stabilization and treatment. Patients should be removed from treatment areas to medical facilities according to their triage priorities and the availability of transportation. Advanced life support to be provided in Priority 1 treatment areas and basic life support in Priority 2 areas.

Patients are transported from the scene to hospitals and other medical facilities by ambulances, helicopters, and other vehicles when appropriate. As transportation becomes available, patients must be allocated to medical facilities according to their ability to receive patients of various priorities and categories. Patients should be treated and transported in priority order:

First - Priority 1 patients who cannot be stabilized in the field.
Second - Stable Priority 1 patients.
Third - Priority 2 patients.
Fourth - Priority 3 patients.

Treatment provided in treatment areas should be governed by the number of patients relative to the personnel and equipment available.

SECTORS

Three specific sector assignments are normally used in medical incidents.

These are Extrication, Treatment, and Transportation. Additional sector assignments may be made, depending on the situation, consistent with fireground operations.

Extrication Sector is responsible for locating, extricating, and removing patients to treatment areas. Triage and initial treatment of patients may or may not take place within the Extrication Sector, depending on the stability of the area where patients are located. The Extrication Officer is responsible for making this determination. (See Extrication Sector.)

Treatment Sector is responsible for establishing and managing treatment area(s) in a safe location to

provide field stabilization and continuing medical supervision for patients awaiting transportation to medical facilities. (See Treatment Sector.)

Transportation Sector is responsible for the allocation of patients to appropriate medical facilities and for the coordination of patient transportation to those locations. (See Transportation Sector.)

In situations which involve a large geographic area, it may be necessary to assign more than one extrication sector and to establish treatment sectors in more than one location. There should be only one Transportation Sector Officer to manage patient allocation from the different treatment areas to medical facilities, although patients may be transported from each treatment area.

OPERATIONAL GUIDELINES

Staging

All outside agencies responding to a medical incident should be dispatched to a staging area. This area should be at sufficient distance to keep the scene clear and maintain access. Staging shall direct arriving units as directed by Command.

Units assigned to sectors, unless carrying special equipment, should park in a staging configuration at a distance from the scene. This parking area should be located out of the access paths. Crews should report to extrication or treatment sectors carrying their medical supplies and backboards.

Apparatus with extrication tools or other heavy equipment needed at the scene should be brought up closer to the actual incident site and parked out of the way.

Ambulances may be directed to a separate staging area to provide service directly to the treatment area. This will be established by the Transportation Sector and announced. This separate staging area will usually be located close to the Treatment Area.

The first arriving company at a medical incident will proceed directly to the scene and assume command. All other units will follow Level I staging procedure unless Level II staging is announced by Command.

Triage

Triage is an ongoing process of patient evaluation which continues throughout the incident.

Initial triage should be performed when a patient is first seen by Fire Department personnel. A triage tag should be attached to each patient at the time (see Triage Tagging procedure 210.04). If it is necessary to urgently remove patients from a hazardous area, triage tagging will be done at the entrance to the Treatment Area.

ALARM HEADQUARTERS RESPONSIBILITIES

Alarm will initially dispatch an assignment to medical incidents which reflects the reported scale and severity of the situation. The assignment will be upgraded by Command, if necessary, based on the actual situation encountered.

Alarm is responsible for notifying and activating other agencies, including hospitals, to provide needed support for the medical emergency incident. The degree of implementation of this notification procedure depends on the scale of the actual incident. The full scale notification procedure is appropriate for a disaster involving numerous patients with Priority 1 and 2 triage classifications. Smaller scale incidents require a more limited notification.

The following should be used as guidelines:

2-1 Medical Assignment

A. Determine approximate number of Priority 1 and 2 patients involved.

B. Contact Level 1 and 2 hospitals in vicinity of incident and determine current ability to receive patients.

1st Alarm - Medical

A. Determine approximate number and triage classification of patients.

B. Advise all ambulance companies of situation.

C. Place AirEvac and Survival Flight on stand-by.

D. Advise all Level 1 hospitals and Level 2 hospitals in vicinity of incident. Determine current Emergency Room status of each facility.

E. Transmit hospital availability information to Command or Transportation Sector on request.

F. Dispatch ambulances and helicopters as requested by Command.

2nd Alarm - Medical

Begin full-scale notification procedure. Continue until reports indicate situation has been stabilized.

Note:

A. Level 1 and 2 medical facilities should be notified according to their specific categories as they relate to the incident, i.e., trauma, burns, pediatric, poisoning, etc.

B. When Transportation Sector advises that all patients have been transported, confirm number of patients sent to each hospital. Advise each notified hospital of total number of patients transported or en route, including those that will not receive any patients.

Notification Procedure for Medical Disaster

This procedure is applicable to large scale mass casualty medical situations.

Ambulances

(1) Notify all ambulance companies of situation.

(2) Dispatch all immediately available ambulances to staging areas.

(3) Determine ETA for ambulances. Fill in ambulance worksheet.

(4) Advise ambulance companies to call-in personnel and activate extra units.

(5) Advise Command of number of ambulances responding.

Helicopters

(1) Place AirEvac, Survival Flight, and DPS Ranger on stand-by. Determine availability to respond.

(2) Dispatch as requested by Command.

(3) Advise radio channel for landing zone coordination, and note zone location when one has been established.

(4) Call Army National Guard if additional helicopters are needed. (Normal business hours 273-9774, nights and weekends 257-9078.) Give landing zone location. Dispatch if requested by Command.

Hospitals

(1) Advise hospitals and emergency centers of situation, location, and approximate number of patients involved. Ask hospitals to determine how many Priority 1, 2, and 3 patients they can handle and stand-by for call back. Advise them not to call AHQ.

(2) Call all Level 1 hospitals and specialty hospitals first. Then call Level 2 facilities according to geographic proximity to scene.

(3) Call back medical facilities to determine ability to receive patients and enter on worksheet. Advise Transportation Sector when ready to receive information.

City Buses

Dispatch Phoenix Transit buses to transport Priority 3 patients. (Ask Command if buses are needed.)

(1) Call.

Note: Phoenix Transit buses are radio dispatched.

Triage Team

Advise County Hospital if triage team is needed at scene. (Ask Command before dispatching.) Dispatch police vehicle or helicopter to transport triage team.

EXTRICATION SECTOR

The Extrication Sector is utilized in multi-patient medical incidents and in situations which require physical extrication of trapped victims. The Extrication Sector is responsible for locating, removing, and transporting patients to appropriate treatment areas. The Extrication Sector is also responsible for any patient treatment which is necessary prior to removal of the patient.

An important decision must be made whether to provide triage at the actual site or to move the patients quickly to a separate treatment area. This will depend on the safety of the site and the arrangement of the patients. It may be necessary to remove the patients on backboards after only a brief examination (ABCs), if they are located in an unsafe area.

The Extrication Sector responsibilities may be summarized as follows:

1. Determination of location, number, and condition of patients.

2. Determination whether triage is to be conducted "on site" or at a treatment area.

3. Evaluation of resources needed for extrication of trapped patients and removal of patients to treatment area.

4. Evaluation of resources needed for triage and preliminary treatment of patients.

5. Communication of resource requirements to Command.

6. Allocation of assigned resources.

7. Supervision of assigned companies.

8. Establishment of Assembly Area for Priority 3 patients to await delayed transportation.

9. Reporting of progress to Command and "all clear" when all victims have been removed.

10. Coordination with other sectors as required.

Extrication Guidelines

The Extrication Officer should assign personnel to help size-up the situation. An evaluation of the number of patients involved and the complexity of extrication requirements is an immediate priority. An initial commitment of one company per five victims is reasonable for extending initial and immediate care when numerous patients are involved.

The Extrication Officer should be positioned in a readily visible location which is accessible to arriving companies and has a view of the scene. Face-to-face communications should be used within the sector. Company officers should use messengers to relay information to the sector officer. The sector officer should wear an orange vest for identification purposes.
Ambulatory (Priority 3) patients who do not need urgent medical assistance should be removed from the scene as soon as possible to reduce confusion. This may require the assignment of one or more companies to assemble these patients and remove them to an area where they will receive medical attention if needed. These patients will initially be gathered together at an "Assembly Area." A city bus may be used to transport these people from the assembly area to a suitable location.

If the patients are spread out in a large area, companies should be assigned to a specific area or group of patients. The company officer assigned will have to determine the immediate needs of those patients and request assistance if necessary. The company officer has responsibility for all those patients until they are delivered to a treatment area or assigned to another company. This company would then become available for re-assignment and report back to the Extrication Sector.

When the scene is stable, patients should be triaged and tagged in the Extrication Sector. The first priority for removal to the treatment area will be "Priority 1" patients, followed by "Priority 2" patients. Priority 1 patients should be moved to a treatment area without delay.

All non-ambulatory patients should be moved on backboards, with cervical collars if indicated. Companies may be assigned as "litter bearers" to assist in this movement. Pick-up trucks, rescue vehicles, baggage carts, or similar conveyances may also be used.

Trapped patients requiring prolonged extrication should be triaged by paramedics and provided advanced life support if needed during extrication.

When victims require forcible extrication, ladder companies should be assigned. Ladder apparatus should be brought in close to the scene while other apparatus is parked at a distance to avoid congestion. If the extrication requires specialized equipment (i.e., wreckers, cranes, cutting torches) these must be requested through Command.

The Extrication Officer is responsible for assuring the safety of the area where patients are being extricated. This will require the commitment of personnel with protective lines and extinguishing equipment where a fire risk exists. If fire is involved, coordination with firefighting sectors will be required. The safety of patients and Fire Department personnel must be a primary concern.

If the incident site involves a large area, it may be necessary to create more than one extrication sector. Responsibility should be divided geographically.

TREATMENT SECTOR

A Treatment Sector is established to provide and manage a site for the treatment of multiple Priority 1 and 2 patients at medical incidents.

The Treatment Sector is responsible for the establishment of the Treatment Area in a suitable location. The Treatment Area must be in a readily accessible location for patient entry and transportation loading but away from any dangerous conditions associated with the incident.

The function is to provide stabilization and continuing care of patients until they can be transported to a medical facility.

The Treatment Area should be established and prepared for the arrival of patients from the Extrication Sector. The Treatment Sector should first establish a "Priority 1" treatment area where paramedic level treatment will be given. A "Priority 2" treatment area should be established if there is a need to hold non-critical patients until transportation is available. The Treatment Sector shall advise Command when ready to receive patients.

The Treatment Sector will determine priorities for patients to be transported to medical facilities and will consult with the Transportation Sector on the allocation of patients to facilities.

The Treatment Sector is responsible for:

1. Evaluation of resources required for treatment and or triage and reporting needs to Command.
2. Identification and establishment of suitable "Priority 1" and "Priority 2" treatment areas.
3. Assignment and coordination of resources to provide suitable treatment for all patients.
4. Triage of arriving patients and continuing evaluation of patient conditions.
5. Determination of transportation priorities for patients.
6. Reporting of progress to Command.
7. Coordination with other sectors.

The Treatment Area should have a readily identifiable entrance. Traffic cones or other markers should be used to make this entrance obvious and the location should be announced. Personnel should be assigned to meet and direct arriving litter-bearers on the placement of patients in "Priority 1" and "Priority 2" areas.

Patients arriving at the Treatment Area without triage tags must be triaged at the entrance and tagged. A triage team should be located at the entrance for this purpose.

Patients in the treatment areas should be arranged in rows with five feet between patients and heads toward the aisles to provide working room.

Advanced life support treatment will be given only in the "Priority 1" treatment area. Less intensive patient monitoring and treatment will be given to the "Priority 2" treatment area with fewer personnel assigned to this area.

Treatment Sector personnel must continue to assess patient condition on an ongoing basis to maintain

appropriate triage classifications and to set treatment and transportation priorities.

If the condition of a patient changes significantly (better or worse) it may be necessary to transfer the patient to a higher or lower priority area.

Firefighting personnel, paramedics, medical staff, and others may be assigned to the Treatment Sector. The Treatment Sector Officer must have specific assignments for these varied personnel to patients in need of treatment and provide the necessary level of support.

If the number of Priority 1 patients exceeds the treatment capability at the scene, Priority 1 patients should be transported immediately. Helicopters with paramedic capability should be assigned to treat and transport these patients as quickly as possible.

The Treatment Sector Officer is responsible for determining the need for additional medical supplies at the scene and requesting their delivery through Command. A supply pool should be established within the Treatment Area.

The Treatment Sector Officer shall wear an orange vest for identification purposes.

If the incident scene is very large, it may be advantageous to establish more than one treatment area or sector in different locations.

TRANSPORTATION SECTOR

The Transportation Sector is responsible for the management of patient transportation from multiple patient medical incidents. The Transportation Sector also allocates patients to appropriate medical facilities in consultation with the Treatment Sector.

Transportation Sector responsibilities include:

1. Determination of patient transportation requirements and availability of ambulances and other transportation.

2. Reporting of resources requirements and progress to Command.

3. Identification of ambulance staging and loading areas and helicopter landing zones.

4. Communication with Alarm medic dispatcher to obtain medical facility status.

5. Coordination of patient transportation and allocation with Treatment Sector.

6. Transportation of patients from the Treatment Area to ambulance and helicopter loading areas.

7. Coordination with other sectors.

The Transportation Sector Officer receives hospital status information from the medic dispatcher. This indicates the capacity of each hospital to receive patients by triage categories.

The Treatment Sector advises Transportation when each patient is ready to be transported to a medical facility. The Transportation Sector Officer allocates those patients to medical facilities according to hospital capacity, availability of transportation, and when possible, hospital specialty.

Transportation Sector personnel pick-up patients from the Treatment Sector when they are ready to be transported. Patients should not be removed from the Treatment Area until transportation is available for them.

Transportation and Treatment personnel should consult together to determine the most appropriate hospital allocation for each patient when options are available.

Transportation Guidelines

The Transportation Sector Officer should be located close to the Treatment Area since frequent coordination and communication is necessary between these sectors. Management of this function may require several personnel, one or more companies, to assist the sector officer. The Transportation Sector Officer shall wear an orange vest for identification purposes. (If multiple treatment sectors are in use, see Multiple Site Coordination.)

Communications should be initially established between Transportation and medic dispatcher on Med 9 (UHF). The medic dispatcher will assign an available UHF channel to maintain communications. This designated channel should be constantly monitored by an aide since all ambulance and hospital information will be relayed on this channel.

Ambulances should be staged and brought in at a time to load. It may be necessary to establish a separate ambulance staging area close to the Treatment Area. The Transportation Sector will assign personnel to manage ambulance staging. Each ambulance should be loaded with patients for one hospital only. No ambulance should transport more than one Priority 1 patient when other options are available.

If helicopters are to be used, a landing zone must be identified at a safe distance from the scene. Transportation Sector personnel must be assigned to the landing zone to coordinate patient loading. Helicopters should be used to provide immediate treatment and transportation of unstable patients.

It may be necessary to use ambulances or other vehicles to carry patients to the landing zone.

Transportation Sector should advise Alarm of the number and condition of patients being sent in each ambulance or helicopter. This will be relayed by the medic dispatcher to the appropriate hospital. The Transportation Sector shall keep track of the number of patients sent utilizing the tear-off portion of the triage tags.

Multiple Site Coordination

In some cases, it may be necessary to transport patients from two or more treatment areas at the same time. This could occur in an incident which involves a large geographic area, making it necessary to treat patients at more than one location. This requires the Transportation Sector Officer to coordinate transportation functions for all of the treatment locations.

The Transportation Sector Officer will be stationed at a central location, preferably at or close to the Command Post. Transportation Sector personnel will be assigned to each treatment area as well coordinate all of these assignments ad assign necessary resources to them. Each assigned area will require at least one full company with a portable radio.

Due to the complexity of this operation, a separate radio channel should be assigned exclusively to the Transportation Sector. This will facilitate the amount of communications necessary between the Sector Officer and the assigned personnel at each location. The Transportation Sector Officer will handle all communications with Alarm (on Med 9 or Ch 4).

The Transportation Sector personnel in each location will report their transportation needs back to the Transportation Sector Officer to obtain resources. The Transportation Sector Officer will then direct ambulance staging to assign one or more ambulances to a specific pick up point.

When an ambulance is ready for loading, the Transportation Sector Officer will specify the number and priority of patients and the destination hospital. The assigned personnel at the pick up location will confirm this information when the ambulance departs.

The Transportation Sector Officer will assign necessary resources to the helicopter landing zone to pick-up patients from treatment areas and move them to the landing zone. This may require a rescue truck or

ambulance. Helicopters should be used to remove Priority 1 patients to the more distant appropriate medical facilities as quickly as possible, relieving the demand on Treatment Sector personnel.

The Transportation Sector personnel assigned to each treatment area will follow the same procedures as are established for an incident with a single treatment area. The Transportation Sector Officer functions as a coordinator and resource allocator, consolidating communications with Alarm and Command.